Forest Health Protection
Pacific Southwest Region

Date: September 1, 2010
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To: Patricia Grantham, Forest Supervisor, Klamath National Forest

Subject: Biological Evaluation of Indian Creek Sanitation and Bear Peak Road Plantations – Happy Camp Ranger District (FHP Report No. N10-004)

On June 1-4, 2010, Cynthia Snyder (Entomologist) and Pete Angwin (Plant Pathologist) from Forest Health Protection visited the Klamath National Forest to review past, current and future thinning projects requesting FHP funding with Roger Siemers (Klamath National Forest SO).

On June 1, Cynthia, Pete and Roger were joined by Carol Sharp, Todd Drake and Pete Holodnick (Happy Camp Ranger District) and to look at possible sanitation projects to limit the spread of Port-Orford cedar (POC) root disease along the west side of Indian Creek and possible Western Bark Beetle Initiative funding for the Bear Peak Road Plantations planned for thinning in FY2012.

Observations and recommendations for the planned projects areas are as follows:

West Side Indian Creek POC
There is currently no known POC root disease infection in Indian Creek. To maintain this condition it is recommended that roadside sanitation be executed by removing all POC 25 feet above the Bald Hornet Road (17N18) and 50 feet below the road. In locations where a creek traverses the road, it is recommended that the area along the creek be treated to 100 feet below the crossing. The same recommendations apply for the main Indian Creek Road (17N32) (Figure 1). Several POC in the area have been tagged for genetic resistance testing (Figure 2). Status of these trees should be confirmed with Chuck Frank, Zone Geneticist, prior to removal. Tagged POC should be removed as part of the sanitation treatment if branch inoculation and root dip tests are negative for resistance. If tests are positive for resistance and material has been propagated at IFG (Institute of Forest Genetics, Placerville, CA or Dorena, OR), the POC may be removed following discussion with Chuck Frank, Roger Siemers and Pete

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Figure 1. Stream crossing along Bald hornet Road (17N18) with Port-orford cedar present.

Angwin on whether the management risks of leaving the tagged trees in question outweigh their value as resistant stock.

Figure 2. Port-orford cedar tagged as part of project to identify root disease resistance.

Bear Peak Road Plantations

The Klamath NF wants to thin, pile and burn in ponderosa pine plantations along the Bear Peak Road. They may propose these acres for FHP funding in FY2012. Much of the project area is covered under the Crawford Vegetation Management NEPA currently in process. Acres outside of the Crawford NEPA will not be proposed for NEPA this year.

We visited plantation units 241-4 (N41º41.526', W123º27.031'), 240-32, 240-60, 240-61 (N41º41.573', W123º28.229'), 241-35, 240-11 (N41º40.791', W123º28.924'), 240-55, 240-66 (N41º41.525'', W123º29.167') and an unlabeled stand near the Dry Lake Fire Staging Area (N41º39.311', W123º31.670'). Plantations were planted ponderosa pine and Douglas-fir in the 1960s through 1980s with a small component of incense cedar and sugar pine seeding in naturally, there is also a small component of oak. Trees were originally planted at 6 x 8 foot spacing, about 600-900 trees per acre (TPA). Spacing is currently about 8x8 foot, approximately 450-600 TPA, reaching capacity with canopies interlocking and self-pruning starting to occur. The trees are primarily precommercial-

sized ponderosa pine, 25-45 years old with the majority of the trees occupying the codominant crown class, creating a closed canopy (Figures 3, 4, 5 and 6) dense brush or grass form the understory of these stands.

The stands are becoming very dense, and the risk to attack by western and mountain pine beetle (*Dendroctonus brevicomis* and *Dendroctonus ponderosae*, respectively) is increasing. The risk to crown fire and mortality from drought is likewise increasing. To address this problem, the District plans to hand-thin leaving only the healthiest, most vigorous, defect-free trees with many sugar pine and Douglas-fir being retained for diversity and oak retained for wildlife habitat. Mastication may be used to remove brush and precommercial-sized trees. Stocking levels will be reduced to 76-134 trees per acre (25-35 foot spacing) and fuels will be hand piled and burned. These treatments will be sufficient to reduce bark beetle risk and meet Regional Density Management policy. Stands with grass understories may be good candidates for matching grants from the Rocky Mountain Elk Foundation if spacing is increased to 40 feet. This would still meet all criteria for both WBBI funding and Regional Density Management policy.

Supporting Details	
Forest Type	Plantations
Location	Matrix
Landscape Treatment	Thin to 25-40 foot spacing, pile, burn
Proposed Treatment	Primarily hand thin, 1 unit may be able to use mechanized thinning followed by hand
NEPA	Crawford Veg. Mgt. NEPA in process
Proposed Acres	
Requested Funding	
Total Cost Per Acre	
Matching Funding	
Species Composition	PP, DF, IC, SP, Oak
Current Diameters	6-14 inches DBH
Residual Diameters	
Current Stocking	
Target Stocking	
Agents of Concern	*D. brevicomis, D. ponderosae*
Recent Activity	None observed
Current Susceptibility	High

Summary

The proposed treatments, if fully implemented, will be effective in addressing concerns regarding bark beetles, fire and drought, and will meet the Regional Forester's density management policy that high risk density levels will not be reached again for at least 20 years. I fully support the treatments as described.

If you have any questions regarding this report and/or need additional information please contact Cynthia Snyder at 530-226-2437 or Pete Angwin at 530-226-2436.

/s/ Cynthia Snyder

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CC: Carol Sharp, Todd Drake, Pete Holodnick, Roger Siemers, Dan Blessing, Pete Angwin, Sheri Smith, Julie Lydick and Phil Cannon